

Claims

5 ^{5m} 1. Device for milking animals, comprising at least one milking stall with means (1, 2, 3) for extracting milk, means (3, 4) for deaerating the milk which has been extracted and means (6) for conveying deaerated milk to a milk tank (11) for storage for a prolonged period, characterized in that the storage volume (12) of the milk tank (11) is designed as a closed chamber with a variable volume which corresponds to the volume of the milk stored in the milk tank (11).

15 2. Device according to Claim 1, characterized in that the device comprises cooling means (9, 10) for cooling the milk to approximately the storage temperature while the milk is being conveyed to the milk tank.

20 3. Device according to Claim 2, characterized in that the milk tank is positioned in a cooled environment or is provided with cooled walls.

25 4. Device according to Claim 1, 2 or 3, characterized in that at least part of the walls (31) of the milk tank (11) is made from flexible material.

30 5. Device according to Claim 4, characterized in that the inner sides of the walls (31) of the milk tank (11) are smooth and free of corners.

6. Device according to Claim 5, characterized in that the milk tank (11) is rotationally symmetrical.

35 7. Device according to one of Claims 4-6, characterized in that the milk tank (11) is positioned in a receptacle (30) for supporting the flexible walls (31).

8. Device according to Claim 1, 2 or 3, characterized in that the walls comprise a movable wall (21) and a fixed wall (15), and sealing means (18) are provided for sealing the opening between the movable wall (21) and the fixed wall (15).

9. Device according to Claim 8, characterized in that the sealing means (18) are attached to the movable wall (21) and comprise a rinsing chamber (B) which is

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open towards the fixed wall (15) and means (16) for circulating rinsing water through the rinsing chamber (B).

10. Device according to Claim 8 or 9, characterized in that at least part of the movable wall (21) and the fixed wall (27) is of double-walled design and may be provided with means (19, 20) for circulating cooling liquid.

11. Device according to Claim 8, 9 or 10, characterized in that at least part of the walls (15, 21, 27) is made of glass.

12. Device according to one of the preceding claims, characterized in that the milk tank (11) is transportable.

13. Device according to one of the preceding claims, characterized in that at least one of the walls (27) is provided with an opening for introducing spray means into the closed chamber (12).

14. Device according to one of the preceding claims, characterized in that the milk tank (11) is provided with signalling means for signalling that the storage volume (12) has reached its maximum.

15. Device according to Claim 14, characterized in that the device comprises a plurality of milk tanks (11) which are all provided with a switchable valve which is coupled to the signalling means.

16. Device according to one of the preceding claims comprising a milking line (104) between the milking cups (101) and a storage tank (117, 118, 119, 120), if appropriate a discharge line (103) between the milking cups (101) and a discharge vessel (116) for the purpose of discharging cleaning liquid or first contaminated milk, and a control system (108), characterized in that the device comprises at least two milk tanks (117, 118, 119, 120) which can be connected to the milking line (104) and also switching means (112, 113), which are connected to the control system (108), for connecting the milking line (104) to one of the milk tanks.

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17. Device according to Claim 16, characterized in that the device comprises identification means (107) for identifying animals which are to be milked and also memory means (108) which determine the expected concentration of a specific substance in and/or property of the milk from an identified animal.

18. Device according to Claim 17, characterized in that the expectations concerning the concentration and/or property during the period of lactation and/or during the milking operation are stored in the memory means (108), in addition to means for coupling the milking line (104) to various milk tanks during a milking operation on the basis of the expected concentration and/or property.

19. Device according to Claim 16, 17 or 18, characterized in that sensor means (110) for milk are incorporated in the milking line (104), for the purpose of measuring the concentration of a specific substance and/or a specific property in the milk, as well as means for connecting the milking line (104) to various milk tanks during the milking operation on the basis of the measured concentration and/or property.

20. Device according to one of Claims 16-19, characterized in that there are plurality of milking stalls (P, Q, R), which each comprise switching means (112, 113) for coupling the milking line (104) to one of the milk tanks (117, 118, 119, 120).

21. Method for milking animals using a device according to one of the preceding claims, characterized in that the milk is transported in the milk tank (11) for further processing.

22. Method for milking animals using a device according to one of Claims 1-20, characterized in that, after the milk tank (11) has been emptied and, if appropriate, cleaned, the storage volume (12) is connected to a subatmospheric pressure in order to minimize the storage volume.

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